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IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (CURRENTLY AMENDED) An image data processing apparatus comprising:
a dividing unit that divides image data into a plurality of blocks;
~~an a block~~ extracting unit that extracts a pair pairs of blocks from the plurality of divided
blocks;
an index extracting unit that extracts -and-outputs a feature index of a first color
component and a feature index of a second color component which differs from the first color
component -for each of from the paired-divided blocks;
~~a registration unit that registers information about a correspondence between the feature~~
~~index of the second color component and a change in the feature index for the first color~~
~~component;-and~~
a code embedding unit that embeds a predetermined-code into the divided block of
image data, by changing the-at least one of the extracted feature index of the first color
component of the pair of blocks based on the-at least one of the extracted feature index of the
second color component of the pair of blocks, using the-and information registered, and embeds
one code corresponding to the paired blocks, based on a magnitude relationship between
feature indices of color components related to the paired blocks about correspondence between
the one of the extracted feature index of the second color component and a change of the
feature index of the first color component.

2. (CANCELLED)

3. (CURRENTLY AMENDED) The image data processing apparatus according to claim 1, wherein the ~~registration unit registers~~ code embedding unit embeds the code into the
divided block of the image data, by changing at least one of the extracted feature index of the
first color component of the pair of blocks based on at least one of the extracted feature index of
the second color component and information about a correspondence between-among the one
of the extracted feature index of the second color component, a difference between the

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extracted feature indices of the second color component related to the pair of paired blocks, and the change ~~in~~of the feature index ~~for~~of the first color component.

4. (ORIGINAL) The image data processing apparatus according to claim 1, wherein the first color component is a yellow component.

5. (ORIGINAL) The image data processing apparatus according to claim 4, wherein the second color component is a magenta component.

6. (ORIGINAL) The image data processing apparatus according to claim 1, further comprising a code extracting unit that extracts the code embedded into the image data.

7. (CURRENTLY AMENDED) An image data processing method comprising:
dividing image data into a plurality of blocks;
extracting a pair pairs of blocks from the plurality of blocks and;
~~extracting~~ outputting a feature index of a first color component and a feature index of a second color component which differs from the first color component for each of the paired divided blocks; and

~~registering information about a correspondence between the feature index of the second color component and a change in the feature index for the first color component; and~~
embedding a predetermined code into the pair of blocks of the image data, by changing at least one of the extracted feature index of the first color component of the pair of the blocks based on at least one of the extracted feature index of the second color component of the pair of blocks, using the and information ~~registered and embedding one code corresponding to the paired blocks based on a magnitude relationship between feature indices of the color components related to the paired blocks about correspondence between the one of the extracted feature index of the second color component and a change of the feature index of the first color component~~.

8. (CANCELLED)

9. (CURRENTLY AMENDED) The image data processing method according to claim 7, wherein the ~~registering includes registering~~ embedding includes embedding the code

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into the divided block of the image data, by changing at least one of the extracted feature index of the first color component of the pair of blocks base on at least one of the extracted feature index of the second color component and information about a correspondence between among the one of the extracted feature index of the second color component, a difference between the feature indices of the extracted second color component related to the pair paired of blocks, and the change in of the feature index for of the first color component.

10. (ORIGINAL) The image data processing method according to claim 7, wherein the first color component is a yellow component.

11. (ORIGINAL) The image data processing method according to claim 10, wherein the second color component is a magenta component.

12. (ORIGINAL) The image data processing method according to claim 7, further comprising extracting the code embedded into the image data.

13. (CURRENTLY AMENDED) A computer-readable recording medium that stores a program that, when executed, makes a computer perform a process comprising:

dividing image data into a plurality of blocks;

extracting a pair pairs of blocks from the ~~plurality of divided blocks and;~~

extracting-outputting a feature index of a first color component and a feature index of a second color component which differs from the first color component in each of from the divided blocks; and

~~registering information about a correspondence between the feature index of a second color component and a change in the feature index for the first color component; and~~

embedding a predetermined code into the pair of blocks of the image data, by changing at least one of the extracted feature index of the first color component of the pair of blocks based on at least one of the extracted feature index of the second color component of the pair of blocks, using the and information registered and embedding one code corresponding to a pair at the paired blocks, based on a magnitude relationship between the feature indices of the color components related to the pair of blocks, based on a magnitude relationship between feature indices of the color components related to the pair at paired blocks about correspondence between the one of the extracted feature index of the second color component and the changing

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value of the first feature index for the first color component.

14. (CANCELLED)

15. (CURRENTLY AMENDED) The computer-readable recording medium according to claim 13, wherein the ~~registering includes registering~~ embedding includes embedding the code into the divided block of the image data, by changing at least one of the extracted feature index of the first color component of the pair of blocks base on at least one of the extracted feature index of the second color component and information about a correspondence between among the one of the extracted feature index of the second color component, a difference between the feature indices of the extracted second color component related to ~~the pair paired~~ of blocks, and the change in ~~of~~ the feature index ~~for~~ of the first color component.

16. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 13, wherein the first color component is a yellow component.

17. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 16, wherein the second color component is a magenta component.

18. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 13, further making the computer perform extracting the code embedded into the image data.

19. (CURRENTLY AMENDED) An image data processing apparatus comprising:
a code embedding unit that embeds a ~~predetermined code~~ into a pair of blocks of image data by changing at least a feature index of a first color component of a block of the pair of blocks, based on a feature index of a second color component of the block, and embeds a code corresponding to paired blocks, based on a magnitude relationship between the feature indices of color components related to the paired pair of blocks.

20. (CURRENTLY AMENDED) An image data processing method comprising:
pairing blocks of image data; and
embedding a code into each pair of the paired blocks by changing at least a feature

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index of a first color component of a block of the paired of blocks based on a magnitude relationship between the feature indices of the first color component and second color component which differs from the first color component components related to the respective pair of the paired blocks.

21. (NEW) An embedding unit that is included in an image data processing apparatus which includes:

- a dividing unit that divides image data into a plurality of blocks;
- a block extracting unit that extracts a pair of blocks from the divided block; and
- an index extracting unit that extracts a feature index of a first color component and a feature index of a second color component which differs from the first color component from the divided block, wherein

the code embedding unit embeds a code into the divided block of the image data, by changing at least one of the extracted feature index of the first color component of the pair of blocks based on at least one of the extracted feature index of the second color component of the pair of blocks and information about correspondence between the one of the extracted feature index of the second color component and a change of the feature index of the first color component.

22. (NEW) A method of embedding a code into an image data in an image data processing method, comprising:

- dividing the image data into a plurality of blocks;
- extracting a pair of blocks from the plurality of blocks; and
- extracting a feature index of a first color component and a feature index of a second color component which differs from the first color component from the divided blocks, wherein

the embedding includes embedding the code into the pair of blocks of the image data, by changing at least one of the extracted feature index of the first color component of the pair of the blocks based on at least one of the extracted feature index of the second color component of the pair of blocks and information about correspondence between the one of the extracted feature index of the second color component and a change of the feature index of the first color component.

23. (NEW) A method of pairing blocks of image data in an image data processing method, comprising:

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pairing blocks of image data; and

embedding a code into the paired blocks by changing at least a feature index of a first color component of a block of the paired of blocks based on a magnitude relationship between the feature indices of the first color component and second color component which differs from the first color component of the paired blocks.

24. (NEW) A computer-readable recording medium that stores a program, that when executed, makes a computer perform embedding a code into image data comprising:

dividing the image data into a plurality of blocks;

extracting a pair of blocks from the divided block; and

extracting a feature index of a first color component and a feature index of a second color component which differs from the first color component from the divided blocks, wherein the embedding includes embedding the code into the pair of blocks of the image data, by changing at least one of the extracted feature index of the first color component of the pair of blocks based on at least one of the extracted feature index of the second color component of the pair block and information about correspondence between the one of the extracted feature index of the second color component and the changing value of the first feature index for the first color component.